

CLAIMS

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A pneumatic tire comprising
a tread portion,
a pair of sidewall portions,
a pair of bead portions each with a bead core and a bead
apex therein,

a carcass comprising a ply of cords extending between the
bead portions through the tread portion and sidewall portions and
turned up around the bead core in each said bead portion from the
inside to the outside of the tire so as to form a pair of turned
up portions and a main portion therebetween,

said bead apex made of hard rubber disposed between the
main portion and turned up portion and extending radially outwards
from the bead core, a length (LA) of the bead apex between the
radially inner end and radially outer end thereof being in a range
of from 0.1 to 0.25 times the section height (H) of the tire,

a reinforcing cord layer disposed along the axially inside
of each said turned up portion, the reinforcing cord layer having
a radially outer end (FU) which is positioned radially outside the
radially outer end (BU) of the bead apex but radially inside the
maximum tire section width point (M), and a radially inner end
(FD) which is positioned radially outside the radially outer end
of the bead core but radially inside the radially outer end (BU)
of the bead apex,

a length (LB) of the reinforcing cord layer between the
radially inner end and the radially outer end thereof being in a
range of from 1.2 to 2.0 times said length (LA) of the bead apex,

the sidewall portions having a minimum thickness (Wmin)
being in a range of not more than 0.5 times a maximum thickness

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(Wmax) of a region where the reinforcing cord layer exists.

2. The pneumatic tire according to claim 1, wherein the carcass is composed of a single ply of radially arranged cords.

3. The pneumatic tire according to claim 1 or 2, wherein a distance (alpha) between the outer end (FU) of the reinforcing cord layer and the radially outer end (BU) of the bead apex along the reinforcing cord layer is not less than 10.0 mm.

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4. The pneumatic tire according to claim 1 or 2, wherein a radial distance (K) of the radially inner end (FD) from the radially outer end (BU) of the bead core is set in a range of from 0.1 to 0.5 times the length (LA) of the bead apex.

5. The pneumatic tire according to claim 1, wherein the ratio (LB/LA) of the length (LB) of the reinforcing cord layer and the length (LA) of the bead apex is in a range of not less than 1.5 but not more than 1.8.

6. The pneumatic tire according to claim 1, wherein said maximum thickness (Wmax) occurs near the radially outer end (BU) of the bead apex, and said minimum thickness (Wmin) occurs between the radially outer end (FU) of the reinforcing cord layer and the maximum tire section width point (M).